

## CLAIMS

The invention claimed is:

1. One or more computer-readable media having computer-useable instructions embodied thereon to be processed by a computing device to perform a method of tracking the progression of a switch transaction through one or more communications components, the method comprising:

creating an audit trail associated with the switch-transaction progression;

iteratively updating the audit trail incident to an occurrence of one or more designated transaction-processing substeps without overwriting previously stored data; and

processing the audit trail whereby it is available for access via a user interface.

2. The media of claim 1, wherein creating the audit trail comprises:

storing a set of transaction-independent data in a first table;

storing a set of transaction-dependent data in a second table; and

linking the first table to the second table.

3. The media of claim 2, wherein linking the first table to the second table includes commonly storing a transaction identifier in both the first table and the second table.

4. The media of claim 2, wherein transaction-independent data is data that does not change as the switch transaction progresses toward completion.

5. The media of claim 4, wherein transaction-dependent data is data that changes as a switch transaction progresses toward completion.

6. The media of claim 5, wherein data that changes as a switch transaction progresses toward completion includes a switch-transaction-status identifier that describes a status of the switch transaction at a particular time or interval.

7. The media of claim 6, wherein iteratively updating the audit trail includes updating the switch-transaction-status identifier.

8. A machine-implemented method for facilitating telecommunications network configuration-transaction processing, the method comprising:

maintaining a first table that stores transaction-independent data;

maintaining a second table that stores transaction-dependent data;

linking the first table to the second table by a transaction identifier; and

without user intervention, iteratively updating the second table but not the first table incident to one or more predetermined substeps of the configuration transaction.

9. The method of claim 8, wherein transaction-independent data includes business data and transaction-dependent data includes transaction data.

10. The method of claim 9, wherein said transaction data includes one or more selections from the following:

a transaction status;

a status date;

a transaction date; and  
a requestor name.

11. The method of claim 9, wherein said business data includes one or more selections from the following:

an NPA code;  
an NPA-NXX code;  
a network element identifier, including an internal identifier and a CLLI;  
a Station Range;  
a trunk; and/or a  
trunk group.

12. The method of claim 9, wherein the business data is data that persists unchanged throughout the duration of processing the configuration transaction.

13. The method of claim 12, wherein the transaction data is data that is limited to a lifespan of a transaction.

14. The method of claim 13, wherein data that is limited to a lifespan of a transaction includes one or more selections from the following:

a status; and/or  
a time stamp.

15. The method of claim 14, wherein iteratively updating the second table includes writing successive rows, each associated with a status of the one or more predetermined substeps.

16. One or more computer-readable media having computer-useable instructions that, when executed by a machine, perform the method of claim 8.

17. One or more memories for storing data associated with creating a transaction-audit trail for access by an application program being executed on a computing device, comprising:

a first data structure stored in the one or more memories, the data structure including a transaction-progression table that tracks a plurality of transaction statuses respectively associated with completing a plurality of subtransaction steps; and

a set of computer-useable instructions that prevent subsequent transaction statuses from overwriting previous transaction statuses.

18. The memory of claim 17, wherein the transaction-progression table comprises:

a first field containing data that uniquely identifies one of a plurality of substeps associated with the transaction; and

a second field containing data representing a status of the one of a plurality of substeps.

19. The memory of claim 18, wherein the first field is a time stamp.

20. The memory of claim 19, wherein a set of computer-useable instructions includes code for generating respective rows of data, each associated with the one of a plurality of substeps.

21. One or more computer-readable media having stored thereon a data structure for monitoring the progression of a telecommunications switch transaction, the data structure comprising:

a first table that stores,

- (1) a transaction-request identifier;
- (2) a first set of data that does not change as the switch transaction progresses toward completion; and
- (3) no data that does change as the switch transaction progresses toward completion;

a second table logically associated with the first table that is iteratively updated as the switch transaction progresses towards completion and stores,

- (1) the transaction-request identifier; and
- (2) a second set of data that does change as the switch transaction progresses toward completion.

22. The media of claim 21, wherein the first set of data includes data related to one or more physical aspects of a communications network.

23. The media of claim 22, wherein the second set of data includes a status identifier that indicates a status of the switch transaction at a prescribed data event.

24. The media of claim 23, wherein the prescribed data event is a substep associated with completing the switch transaction.

25. The media of claim 23, wherein the second set of data further includes a time stamp associated with the prescribed data event.

26. A method for increasing the efficiency of a communications network comprising storing business data in a table separate from transaction data.